



Eckert & Ziegler Medical

Radiosynthesis Technology

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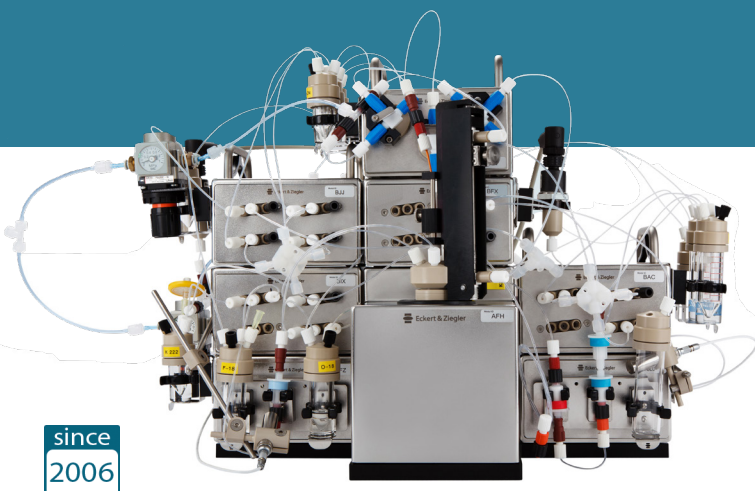


Eckert & Ziegler

Research & Development

Modular-Lab Standard

Tubing based system | custom syntheses for novel tracers | maximum flexibility | disposable items such as valves, tubing, cartridges commercially available



since
2006

Versatile Equipment for Research

The synthesis program, tubing and other components can easily be generated and modified by the user; thus making the device very suitable for customized synthesis.

Unique modular approach

Choose from a large variety of valve modules, modules for heating & cooling, gas flow control, modules for reaction in gas phase, compact semipreparative HPLC module, analytical HPLC and many others with the flexibility to configure syntheses for novel tracers. Laptop included in delivery.

Modular-Lab PharmTracer

Cassette based system | ideal for later stage clinical syntheses or routine production | research & development of radiopharmaceuticals



since
2009

Multi-Tracer Production

Extremely versatile system with a wide range of possible applications on one set-up. Production of a large variety of tracers.

Configuration for ¹⁸F-Tracers

Electrical cabinet (EC); cassette modules SLM-2 and SLM-4; Heater Reactor Module HRM; Syringe Module SYM; Vacuum Pump; laptop; Modular-Lab software; starter pack cassettes.

Routine Production

Modular-Lab easy

Smallest cassette based synthesizer on the market | easy operation and short synthesis time | high yield and high radiochemical purity



since
2013

Minimum Space. Maximum Efficiency.

The Modular-Lab easy is available with the **Multi Generator Elution Tool** to produce multi-dose or various high activity single doses in only one production process with highest efficiency.

Included in standard delivery

Modular-Lab easy synthesizer; electrical cabinet (EC); peristaltic pump; cassettes; laptop; Modular-Lab software; starter pack cassettes.

KitLab*

Fully automated, stand-alone device | cost efficient | fast user set up | no PC or EC needed | pre-elution function | calculation of remaining generator activity | RFID technology



since
2018

Kit Labeling Solution

Designed to offer an automated solution to improve reproducibility of results and to protect users of unnecessary exposure in accordance with ALARA guidelines when labeling cold kits.

Included in standard delivery

KitLab device; activity shielding containers according to application; starter pack cassettes incl. RFID cards.

* patent pending

Cassettes, Accessories & Software

Single-use cassettes

Assembled under GMP compliant clean room conditions | sterilized with gamma radiation (validated process) | shelf-life of 18 months | avoiding cross-contamination



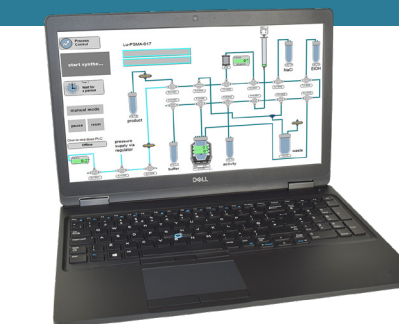
Accessories

Starter units of 10 pieces sterile cassettes are included in delivery. With an individual barcode labeled cassettes (ML easy) ensure compatibility of cassette and synthesis project. Modular-Lab easy and KitLab come with color coded spikes and vials to simplify handling.

Multiple optional items such as barcode reader, Multi Generator Elution Tool, pre-elution cassette, printer, shielding container and more are available upon request.

Modular-Lab software

Intuitive graphical user interface | drag & drop of symbols | compliant with GMP, cGAMP, GAMP 5 and CFR part 11 regulations



Modular-Lab Software

Use pre-validated templates or generate your own synthesis project. Four defined security levels meet all demands to safely process data and the application-specific setup.

Laptop, Windows, Modular-Lab software and programs for syntheses, elution of generator and pressure test of cassette and sterile product filter (if applicable) are included in the standard delivery.

Synthesizer size comparison



Basic Modular-Lab PharmTracer configuration

	Modular-Lab Standard	Modular-Lab PharmTracer	Modular-Lab easy	KitLab
Nuclide focus	novel tracers (research), ¹¹ C, ⁶⁴ Cu, ¹⁸ F, ⁶⁸ Ga, ¹³¹ I & more	theranostic tracers (⁶⁸ Ga, ¹⁷⁷ Lu, ⁹⁰ Y) and novel tracers ¹¹ C, ⁶⁴ Cu, ¹⁸ F, ¹¹¹ In	theranostic tracers (⁶⁸ Ga, ¹⁷⁷ Lu, ⁹⁰ Y)	⁶⁸ Ga
Upgradable set-up	✓	✓		✓
Footprint	depends on set-up for specific synthesis	280 x 268 x 515 mm (L x W x H) (set-up for ¹⁸ F-tracer)	201 x 227 x 105 mm (L x W x H)	340 x 280 x 270 mm (L x W x H)

Our synthesizers in comparison

	Modular-Lab Standard	Modular-Lab PharmTracer	Modular-Lab easy	KitLab
Batch report	extensive protocol, available as PDF	extensive protocol, available as PDF	extensive protocol, available as PDF	stored on RFID & SD card, printable with label printer
Software	open, programmable	open or closed	closed	integrated software
Cassette test	n.a.	✓ (pressurized air)	in-house	n.a.
Filter integrity test	✓ (pressurized air)	✓ (pressurized air)	✓ Filter Test Module	n.a.
Liquid transfer	by gas pressure or syringe pump	by syringe module	by integrated pump	by peristaltic pump

Our team of highly qualified experts and our strong network of international partners give us the ability to detect and set trends in the market!



Eckert & Ziegler Radiopharma

The Eckert & Ziegler Radiopharma segment is a business division of the Eckert & Ziegler group, with headquarters in Berlin, Germany.

We deliver versatile, fully automated and GMP compliant synthesis equipment for the development and production of radiopharmaceuticals corresponding to your individual needs.

Various Applications for Various Needs

Modular-Lab Standard customizable syntheses

according to your needs e.g. ^{18}F -FEC, ^{18}F -FDG, ^{18}F -FET,

^{18}F -Flumazenil, ^{18}F -MISO, ^{11}C -Choline, ^{11}C -Methyl iodide, ^{131}I -MIBG,

^{68}Ga -DOTA-TATE/TOC, ^{64}Cu applications and more **Modular-Lab**

PharmTracer ^{68}Ga -DOTA-TATE/TOC, ^{68}Ga -PSMA-11, ^{68}Ga -FAPI-46, ^{68}Ga -

PentixaFor, ^{111}In -DOTA-TATE/TOC, ^{177}Lu -DOTA-TATE/TOC, ^{90}Y -DOTA-TATE/TOC,

^{177}Lu -PSMA-617, ^{18}F -FLT, ^{18}F -FES, ^{18}F -FDG, ^{18}F -FMISO, ^{18}F -NaF, ^{18}F -FET, ^{18}F -PSMA-1007,

^{64}Cu -ATSM, ^{11}C -Methyl iodide, ^{11}C -Methyl triflate, ^{11}C -Acetate, ^{11}C -Choline, ^{11}C -Methionine

Modular-Lab eazy ^{68}Ga -DOTA-TATE/TOC, ^{68}Ga -PSMA-11, ^{68}Ga -DOTA-PSMA, ^{68}Ga -FAPI-46,

^{68}Ga -PentixaFor, ^{90}Y -DOTA-TATE/TOC, ^{90}Y -DOTA-PSMA, ^{177}Lu -DOTA-TATE/TOC, ^{177}Lu -DOTA-PSMA

KitLab ^{68}Ga -PSMA-11

Further tracers and applications under development

Eckert & Ziegler Medical

Eckert & Ziegler Medical is one of two business segments of the Eckert & Ziegler group and represents our combined efforts in providing high quality products and comprehensive services in the fields of nuclear medicine, radiation therapy and beyond.

Whether you are looking for a single product or a partner to support your project with customized services and solutions, we are here to contribute to your success.

Our Promise

Reliable products
Innovative and compliant solutions
Quality and passion driven services

Our Products and Services

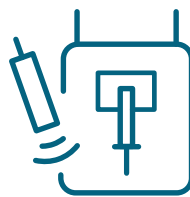
^{68}Ge / ^{68}Ga Generators
Radiopharmaceuticals and Chemicals
Radiopharmaceutical Development
Radiosynthesis and Quality Control (TLC, HPLC)
Hot Cell Solutions
Contract Manufacturing
Regulatory Support
Radioactive Logistics
User Meetings and Trainings on all our devices



RADIOPHARMA



ENGINEERING



LAB DEVICES



RADIATION THERAPY

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